

Ground and Flight Software Capabilities

Ground and Flight Software

ZIN is an experienced supplier for mission critical software and firmware. We deliver products:

- Embedded real-time software and firmware for space vehicles, ISS flight experiments and on-orbit facilities
- Ground software for support of flight-unit checkout, ground test and mission control facilities
- Command and control software for ISS payload operations and ground stations

ZIN has developed a Windows based ground software application written in Visual C++ that is used for the major ISS payload operations performed at the Glenn Research Center (GRC). The application is customizable for each payload for displays and commands specific to the experiment. Systems utilize a MySQL database engine to define customized command and telemetry packets for each payload, allowing for individual ranges, limits and enumerations for telemetry items and command parameters.



ZIN is an experienced supplier for mission critical flight and ground software/firmware applications including documentation, requirements and verifications for conducting effective inspections, reviews and audits. Our software teams are proficient at managing and executing system, functional and regression tests, creating effective test strategies for projects with varying degrees of complexity. We have expertise in planning for the full life-cycle of the software including remote updates and configuration management.

ZIN has AS9100-standard processes for Configuration Management, Software Assurance and all other activities needed to support the full project life cycle. ZIN FPGA firmware development abilities include real-time control, PCI-bus interfaces, MIL-STD-1553 bus, signal and image processing and ModelSim verification using ACTEL and Xilinx.

- ZIN is developing software for real-time operations systems (OS) using VxWorks, Linux based OS, and the cross-platform framework Qt using C++.
- ZIN has extensive digital logic design experience including proficiency in FPGA implementation and ASIC development.
- We utilize formal configuration management systems for software and flight system software products.
- ZIN has a long history of compliance with NASA's Information Technology (IT) and web based systems standards and security requirements.



ZIN Technologies



Voyager Space External Use
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